

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
15 January 2004 (15.01.2004)

PCT

(10) International Publication Number
W0 2004/005922 A3

- (51) International Patent Classification⁷: **G01N 33/50**, **B01L 3/00**, **C12Q 1/04** (74) Agent: **GILL JENNINGS & EVERY**; Broadgate House, 7 Eldon Street, London EC2M 7LH (GB).
- (21) International Application Number: **PCT/GB2003/002976** (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (22) International Filing Date: **9 July 2003 (09.07.2003)** (25) Filing Language: **English**
- (26) Publication Language: **English**
- (30) Priority Data: **0215879.8** **9 July 2002 (09.07.2002)** **GB** (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- (71) Applicants (*for all designated States except US*): **CAMBRIDGE UNIVERSITY TECHNICAL SERVICES LTD** [GB/GB]; The Old Schools, Trinity Lane, Cambridge CB2 1TS (GB). **GLAXOSMITHKLINE PLC** [GB/GB]; 980 Great West Road, Brentford, Middlesex TW8 9GS (GB).
- (72) Inventors; and (75) Inventors/Applicants (*for US only*): **LOWE, Christopher, Robin** [GB/GB]; Institute of Biotechnology, University of Cambridge, Tennis Court Road, Cambridge CB2 1QT (GB). **GERSHATER, Craig, J., L.** [GB/GB]; Cambridge Bioprocess Management Ltd., 68 London Road, Harston, Cambridge CB2 5QJ (GB). **DAVIDSON, Colin, Alexander, Bennett** [GB/GB]; Institute of Biotechnology, University of Cambridge, Tennis Court Road, Cambridge CB2 1QT (GB).
- Published:
— *with international search report*
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*
- (88) Date of publication of the international search report:
11 March 2004
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: **MONITORING OF CELLS**

(57) Abstract: A method for monitoring cells in a microfluidic device, wherein the device includes a chamber comprising a sensor, and the monitoring is under conditions such that attachment of cells to the surface of the chamber is inhibited.

INTERNATIONAL SEARCH REPORT

Application No

PCT/GB 03/02976

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G01N33/50 B01L3/00 C12Q1/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G01N C12Q B01L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 99 67639 A (ALAJOKI MARJA LIISA ;SUNDBERG STEVEN A (US); WADA H GARRETT (US);) 29 December 1999 (1999-12-29) page 21, paragraph 2 page 23, paragraph 5 -page 24, paragraph 2 page 25, paragraph 5 -page 26, paragraph 1	1-27
X	WO 99 47922 A (MASSACHUSETTS INST TECHNOLOGY) 23 September 1999 (1999-09-23) abstract page 4, paragraph 2 -page 5, paragraph 1 page 21, paragraph 2 page 27, paragraph 4 page 32, paragraph 3 claims	1-27

-/--

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

Z document member of the same patent family

Date of the actual completion of the international search

19 December 2003

Date of mailing of the international search report

02/01/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax (+31-70) 340-3016

Authorized officer

Pellegrini, P

INTERNATIONAL SEARCH REPORT

Application No

PCT/GB 03/02976

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 308 757 A (KAWAMURA YOSHIO ET AL) 3 May 1994 (1994-05-03) column 1, paragraph 1 column 7, paragraph 2 -----	1-27
A	MCCONNELL H M ET AL: "THE CYTOSENSOR MICROPHYSIOMETER: BIOLOGICAL APPLICATIONS OF SILICONTECHNOLOGY" SCIENCE, AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE,, US, vol. 257, no. 5078, 25 September 1992 (1992-09-25), pages 1906-1912, XP000560386 ISSN: 0036-8075 cited in the application the whole document -----	1-27

INTERNATIONAL SEARCH REPORT

Application No

PCT/GB 03/02976

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9967639	A	29-12-1999	AU 4957099 A EP 1088229 A1 WO 9967639 A1 US 6529835 B1	10-01-2000 04-04-2001 29-12-1999 04-03-2003
WO 9947922	A	23-09-1999	AT 227338 T CA 2324208 A1 DE 69903800 D1 DE 69903800 T2 EP 1064353 A2 WO 9947922 A2 US 6197575 B1	15-11-2002 23-09-1999 12-12-2002 02-10-2003 03-01-2001 23-09-1999 06-03-2001
US 5308757	A	03-05-1994	JP 2966904 B2 JP 4094696 A	25-10-1999 26-03-1992